

CLAIMS

1. A method for encoding a digital image, **characterized** in that, until the encoded image fits into the desired amount of data, the method repeats:

encoding (402) the image into an encoded image, the encoding comprising quantizing (404) causing lossy compression;

decoding (410) the encoded image into an image, the decoding comprising inverse quantizing (412); and

increasing (414) the losses in compression caused by the quantizing.

2. A method as claimed in claim 1, **characterized** in that, for the purpose of optimizing the quality of the encoded image, the losses in compression caused by quantizing are increased in such a manner that each encoding reduces the amount of data required by the encoded image by 1/4 to 1/100 of the amount of data required originally.

3. A method as claimed in claim 1, **characterized** in that, for the purpose of speeding up encoding, the losses in compression caused by quantizing are initially increased in such a manner that each encoding reduces the amount of data required by the encoded image by 1/2 to 1/4 of the amount of data required originally, and at the end of encoding in such a manner that each encoding reduces the amount of data required by the encoded image by 1/4 to 1/100 of the amount of data required originally.

4. A method as claimed in claim 1, **characterized** in that, for the purpose of speeding up encoding, the losses in compression caused by quantizing are increased in such a manner that the first encoding reduces the amount of data required by the encoded image by half of the amount of data required originally, and each of the following encodings halves the amount of data required by the encoded image.

5. A method as claimed in claim 1, **characterized** in that the desired amount of data is defined as the size of the file used for storing the encoded image, or as the bandwidth of the data transmission link used for transmitting the encoded image, or as the compression density of the encoded image.

6. A device for encoding a digital image, **characterized** in that the device comprises

an encoder (110) for encoding an image into an encoded image, the encoder (110) comprising a quantizer (112) for performing the quantizing causing lossy compression;

a decoder (126) for decoding the encoded image into an image, the decoder (126) comprising a inverse quantizer (128) for performing inverse quantizing; and

the encoder (110) has a feedback connection through the decoder (126) to the encoder (110); and

the device is configured to repeat the encoding until the encoded image fits into the *desired amount of data by encoding the image with the encoder (110) into an encoded image, decoding the encoded image with the decoder (126) into an image, and increasing, during each feedback, the losses in compression caused by the quantizing in the quantizer (112).*

7. A device as claimed in claim 6, **characterized** in that the quantizer (112) is configured, for the purpose of optimizing the quality of the encoded image, to increase the losses in compression caused by quantizing in such a manner that each encoding reduces the amount of data required by the encoded image by 1/4 to 1/100 of the amount of data required originally.

8. A device as claimed in claim 6, **characterized** in that the quantizer (112) is configured, for the purpose of speeding up encoding, to increase the losses in compression caused by quantizing initially in such a manner that each encoding reduces the amount of data required by the encoded image by 1/2 to 1/4 of the amount of data required originally, and at the end of encoding in such a manner that each encoding reduces the amount of data *required by the encoded image by 1/4 to 1/100 of the amount of data required originally.*

9. A device as claimed in claim 6, **characterized** in that the quantizer (112) is configured, for the purpose of speeding up encoding, to increase the losses in compression caused by quantizing initially in such a manner that the first encoding reduces the amount of data required by the encoded image by half of the amount of data required originally, and each of the following encodings halves the amount of data required by the encoded image.

10. A device as claimed in claim 6, **characterized** in that the device is configured to define the desired amount of data as the size of the file used for storing the encoded image, or as the bandwidth of the data transmis-

sion link used for transmitting the encoded image, or as the compression density of the encoded image.

11. A computer program on a carrier for encoding a digital image, **characterized** in that the computer program comprises commands to be executed in a computer that, until the encoded image fits into the desired amount of data, make the computer repeat:

encoding the image into an encoded image, the encoding comprising quantizing causing lossy compression;

decoding the encoded image into an image, the decoding comprising inverse quantizing; and

increasing the losses in compression caused by the quantizing.

12. A computer program as claimed in claim 11, **characterized** in that, for the purpose of optimizing the quality of the encoded image, the losses in compression caused by quantizing are increased in such a manner that each encoding reduces the amount of data required by the encoded image by 1/4 to 1/100 of the amount of data required originally.

13. A computer program as claimed in claim 11, **characterized** in that, for the purpose of speeding up encoding, the losses in compression caused by quantizing are initially increased in such a manner that each encoding reduces the amount of data required by the encoded image by 1/2 to 1/4 of the amount of data required originally, and at the end of encoding in such a manner that each encoding reduces the amount of data required by the encoded image by 1/4 to 1/100 of the amount of data required originally.

14. A computer program as claimed in claim 11, **characterized** in that, for the purpose of speeding up encoding, the losses in compression caused by quantizing are increased in such a manner that the first encoding reduces the amount of data required by the encoded image by half of the amount of data required originally, and each of the following encodings halves the amount of data required by the encoded image.

15. A computer program as claimed in claim 11, **characterized** in that the desired amount of data is defined as the size of the file used for storing the encoded image, or as the bandwidth of the data transmission link used for transmitting the encoded image, or as the compression density of the encoded image.

16. A computer program as claimed in claim 11, **characterized** in that the carrier comprises at least one of the following: computer

memory, computer-readable memory, telecommunications signal, file used to distribute a computer program.